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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/597,973	06/20/2000	Andrew Purtell	NA11P072/00.026.01	9016

28875 7590 07/19/2004

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EXAMINER	
NORRIS, TREMAYNE M	

ART UNIT	PAPER NUMBER
2137	10

DATE MAILED: 07/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/597,973	PURTELL ET AL.	
	Examiner	Art Unit	
	Tremayne M. Norris	2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *4,7-19,23,24,28 and 29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *23,24,28 and 29* is/are allowed.

6)☒ Claim(s) *4 and 7-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 June 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 4,7-19 have been considered but are moot in view of the new ground(s) of rejection.

Specification

2. The disclosure is objected to because of the following informalities: On page 4 line 13, the elements described in the paragraph are not found in Fig.1, they are however found in Fig.2.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coile et al (US pat 6,006,268), and further in view of Coss (EP0909073) and Ehley (US pat 5,737,531).

Regarding claim 4, Coile teaches a method for enhancing network throughput between an internal network and an external network to which one or more servers are connected, comprising the steps of:

providing a firewall between the internal network and the external network (col.7 lines 24-28);

opening a plurality of TCP connections between said firewall and one or more of the servers, each said TCP connection having a TCP control block; creating a common TCP control block for a group of TCP connections through said firewall to the same server; placing connection state data shared by each said TCP connection into said common TCP control block, wherein each individual said TCP control block includes a pointer to the CCB for said shared connection state data. (col.16 line 39 thru col.17 line 16).

Coile does not teach the steps of connecting said firewall to one or more additional firewalls with an internal network, and sharing TCP control block with one or more of said additional firewalls connected to said firewall;

sharing step is performed by pushing said TCP control block from one of said firewalls to one or more of said additional firewalls; and

said pushing takes place at periodic intervals.

Coss teaches the steps of connecting said firewall to one or more additional firewalls with an internal network, and sharing TCP control block with one or more of said additional firewalls connected to said firewall (pages 7-8 section 5). Also, Coss

teaches sharing step is performed by pushing said TCP control block from one of said firewalls to one or more of said additional firewalls (pages 7-8 section 5). It would have been obvious to one of ordinary skill in the art to combine Coile et al's apparatus for reducing overhead on a proxied connection with Coss's teachings of sharing control blocks with one or more firewalls in order to unburden a firewall with application proxies by redirecting network sessions to other firewalls for processing (Coss page 3 lines 4-7).

Ehley teaches said pushing takes place at periodic intervals. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Coile's apparatus for reducing overhead on a proxied connection as modified above with Ehley's system for transmitting control packets in order to enable a network to perform more efficiently, thus enhancing system performance (Ehley col.9 lines 35-44).

5. Claims 7,8,10-15,17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coile et al (US pat 6,006,268), and further in view of Coss (EP0909073) and Tyra et al (US pat 6,442,565).

Regarding claim 7, Coile teaches a method for enhancing network throughput between an internal network and an external network to which one or more servers are connected, comprising the steps of:

providing a firewall between the internal network and the external network (col.7 lines 24-28);

opening a plurality of TCP connections between said firewall and one or more of the servers, each said TCP connection having a TCP control block; creating a common TCP control block for a group of TCP connections through said firewall to the same server; placing connection state data shared by each said TCP connection into said common TCP control block, wherein each individual said TCP control block includes a pointer to the CCB for said shared connection state data. (col.16 line 39 thru col.17 line 16).

Coile does not teach the steps of connecting said firewall to one or more additional firewalls with an internal network, and sharing TCP control block with one or more of said additional firewalls connected to said firewall;

sharing step is performed by pulling said TCP control block from one of said firewalls to one or more of said additional firewalls; and

said pulling takes place at periodic intervals.

Coss teaches the steps of connecting said firewall to one or more additional firewalls with an internal network, and sharing TCP control block with one or more of said additional firewalls connected to said firewall (pages 7-8 section 5). Also, Coss teaches sharing step is performed by pulling said TCP control block from one of said firewalls to one or more of said additional firewalls (page 8 lines 18-28). It would have been obvious to one of ordinary skill in the art to combine Coile et al's apparatus for reducing overhead on a proxied connection with Coss's teachings of sharing control blocks with one or more firewalls in order to unburden a firewall with application proxies by redirecting network sessions to other firewalls for processing (Coss page 3 lines 4-7).

Tyra teaches said pulling takes place at periodic intervals (col.6 lines 53-61). It would have been obvious to one of ordinary skill in the art to combine Coile et al's apparatus for reducing overhead on a proxied connection as modified above with Tyra's system and method for transmitting data content in a computer network in order to reduce the amount of data traffic thereby increasing network throughput (Tyra col.1 lines 24-28; col.1 lines 38-41; col.3 lines 30-41).

Regarding claim 8, Coile teaches a method for enhancing network throughput between an internal network and an external network to which one or more servers are connected, comprising the steps of:

providing a firewall between the internal network and the external network (col.7 lines 24-28);

opening a plurality of TCP connections between said firewall and one or more of the servers, each said TCP connection having a TCP control block; creating a common TCP control block for a group of TCP connections through said firewall to the same server; placing connection state data shared by each said TCP connection into said common TCP control block, wherein each individual said TCP control block includes a pointer to the CCB for said shared connection state data. (col.16 line 39 thru col.17 line 16).

Coile does not teach the steps of connecting said firewall to one or more additional firewalls with an internal network, and sharing TCP control block with one or more of said additional firewalls connected to said firewall;

sharing step is performed by pulling said TCP control block from one of said firewalls to one or more of said additional firewalls; and

one of said firewalls initiates said pulling before said firewall attempts to open a new TCP connection.

Coss teaches the steps of connecting said firewall to one or more additional firewalls with an internal network, and sharing TCP control block with one or more of said additional firewalls connected to said firewall (pages 7-8 section 5). Also, Coss teaches sharing step is performed by pulling said TCP control block from one of said firewalls to one or more of said additional firewalls (page 8 lines 18-28). It would have been obvious to one of ordinary skill in the art to combine Coile et al's apparatus for reducing overhead on a proxied connection with Coss's teachings of sharing control blocks with one or more firewalls in order to unburden the firewall with application proxies by redirecting network sessions to other firewalls for processing (Coss page 3 lines 4-7).

Tyra teaches one of said firewalls initiates said pulling before said firewall attempts to open a new TCP connection (col.6 line 53 thru col.7 line 3). It would have been obvious to one of ordinary skill in the art to combine Coile et al's apparatus for reducing overhead on a proxied connection as modified above with Tyra's system and method for transmitting data content in a computer network in order to reduce the amount of data traffic thereby increasing network throughput (Tyra col.1 lines 24-28; col.1 lines 38-41; col.3 lines 30-41).

Regarding claim 10, Coile, Coss, and Tyra teach the method of claim 7, in addition Coile et al teach the step of adjusting the connection rate and data throughput through one said firewall based on the connection rate and data throughput through said one or more other firewalls, as determined from said one or more common TCP control blocks received from said one or more other firewalls (col.6 lines 8-20).

Regarding claim 11, Coile, Coss, and Tyra teach the method of claim 7, in addition Coile et al teach the step of providing a single physical point of contact between the internal network and. the external network (fig.1; col.7 lines 24-25).

Regarding claim 12, Coile, Coss, and Tyra teach the method of claim 7, in addition Coile et al teach the step of adjusting the connection rate and data throughput of one or more said TCP connection through one said firewall based on the connection rate and data throughput of one or more said other firewalls, as determined from said common TCP control blocks (col.6 lines 8-20).

Regarding claim 13, Coile, Coss, and Tyra teach the method of claim 7, in addition Coss teaches the step of deleting one of said TCP control blocks associated with an individual firewall a substantially fixed period of time after said TCP control block was created (page 4 lines 36-37).

Regarding claim 14, Coile, Coss, and Tyra teach the method of claim 7, in addition Coss teaches the step of deleting one of said common TCP control blocks associated with an individual firewall a substantially fixed period of time after said common TCP control block was received from another said firewall (page 4 lines 36-37).

Regarding claim 15, Coile, Coss, and Tyra teach the method of claim 7, in addition Coss teaches the step of deleting one of said common TCP control blocks from one of said firewalls if said common TCP control block has not been used by said one of said firewalls for a substantially fixed period of time (page 4 line 29).

Regarding claim 17, Coile, Coss, and Tyra teach the method of claim 7, in addition Coile teaches said firewall is a proxy server (col.7 lines 24-28).

Regarding claim 18, Coile, Coss, and Tyra teach the method of claim 7, in addition Coile teaches the step of adjusting the connection rate and data throughput of one said TCP connection through said firewall based on the connection rate and data throughput of said other TCP connections, as determined from said common TCP control blocks (col.6 lines 8-20).

Regarding claim 19, Coile, Coss, and Tyra teach the method of claim 7, in addition Coile teaches said common TCP control block created for said firewall is stored in said firewall (col.6 lines 13-20; col.16 lines 39-43).

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coile, Coss, and Tyra, and further in view of Foss et al (US pat 6,295,557).

Regarding claim 9, Coile, Coss, and Tyra teach the method of claim 7, but do not teach storing control blocks received from one or more firewalls. Foss et al do teach storing control blocks (col. 7 lines 1-12; col.7 lines 32-35). It would have been obvious to one of ordinary skill in the art to combine Coile et al, Coss, and Tyra's apparatus for reducing overhead on a proxied connection with Foss et al's teaching of storing control blocks in order to mark the control block as being a control block that belongs to a connection from a particular source (Foss et al col.7 lines 15-18).

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coile, Coss, and Tyra, and further in view of Schilke.

Regarding claim 16, Coile, Coss, and Tyra teach the method of claim 15, but do not teach said period of time is substantially equivalent to the TCP maximum segment

lifetime. Schilke teaches using the period of time substantially equivalent to the TCP maximum segment lifetime (page 2 section 3). It would have been obvious to one of ordinary skill in the art to combine Coile et al, Coss, and Tyra's apparatus for reducing overhead on a proxied connection with Schilke's teaching of using the TCP maximum segment lifetime in order to eliminate reuse of sequence numbers (Schilke page 2 section 3).

Allowable Subject Matter

Claims 23,24,28,29 are allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tremayne M. Norris whose telephone number is (703) 305-8045. The examiner can normally be reached on M-F 7:30AM-5:00PM alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on (703) 305-4789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tremayne Norris

June 30, 2004

MATTHEW SMITHERS
PRIMARY EXAMINER
Art Unit 2137